



17810-518.ST25  
SEQUENCE LISTING

<110> Uchida, Nobuko  
Capela, Alexandra

<120> Enriched Central Nervous System Stem Cell and Progenitor Cell  
Populations, and Methods for Identifying, Isolating and Enriching  
for Such Populations

<130> 17810-518

<140> 10/649,234

<141> 2003-08-27

<150> 60/406,546

<151> 2002-08-27

<160> 2

<170> PatentIn version 3.2

<210> 1

<211> 1130

<212> PRT

<213> Homo sapiens

<400> 1

Met Ala Ala Ala Gly Gln Leu Cys Leu Leu Tyr Leu Ser Ala Gly Leu  
1 5 10 15

Leu Ser Arg Leu Gly Ala Ala Phe Asn Leu Asp Thr Arg Glu Asp Asn  
20 25 30

Val Ile Arg Lys Tyr Gly Asp Pro Gly Ser Leu Phe Gly Phe Ser Leu  
35 40 45

Ala Met His Trp Gln Leu Gln Pro Glu Asp Lys Arg Leu Leu Leu Val  
50 55 60

Gly Ala Pro Arg Gly Glu Ala Leu Pro Leu Gln Arg Ala Asn Arg Thr  
65 70 75 80

Gly Gly Leu Tyr Ser Cys Asp Ile Thr Ala Arg Gly Pro Cys Thr Arg  
85 90 95

Ile Glu Phe Asp Asn Asp Ala Asp Pro Thr Ser Glu Ser Lys Glu Asp  
100 105 110

Gln Trp Met Gly Val Thr Val Gln Ser Gln Gly Pro Gly Gly Lys Val  
115 120 125

Val Thr Cys Ala His Arg Tyr Glu Lys Arg Gln His Val Asn Thr Lys  
130 135 140

## 17810-518.ST25

Gln Glu Ser Arg Asp Ile Phe Gly Arg Cys Tyr Val Leu Ser Gln Asn  
145 150 155 160

Leu Arg Ile Glu Asp Asp Met Asp Gly Gly Asp Trp Ser Phe Cys Asp  
165 170 175

Gly Arg Leu Arg Gly His Glu Lys Phe Gly Ser Cys Gln Gln Gly Val  
180 185 190

Ala Ala Thr Phe Thr Lys Asp Phe His Tyr Ile Val Phe Gly Ala Pro  
195 200 205

Gly Thr Tyr Asn Trp Lys Gly Ile Val Arg Val Glu Gln Lys Asn Asn  
210 215 220

Thr Phe Phe Asp Met Asn Ile Phe Glu Asp Gly Pro Tyr Glu Val Gly  
225 230 235 240

Gly Glu Thr Glu His Asp Glu Ser Leu Val Pro Val Pro Ala Asn Ser  
245 250 255

Tyr Leu Gly Leu Leu Phe Leu Thr Ser Val Ser Tyr Thr Asp Pro Asp  
260 265 270

Gln Phe Val Tyr Lys Thr Arg Pro Pro Arg Glu Gln Pro Asp Thr Phe  
275 280 285

Pro Asp Val Met Met Asn Ser Tyr Leu Gly Phe Ser Leu Asp Ser Gly  
290 295 300

Lys Gly Ile Val Ser Lys Asp Glu Ile Thr Phe Val Ser Gly Ala Pro  
305 310 315 320

Arg Ala Asn His Ser Gly Ala Val Val Leu Leu Lys Arg Asp Met Lys  
325 330 335

Ser Ala His Leu Leu Pro Glu His Ile Phe Asp Gly Glu Gly Leu Ala  
340 345 350

Ser Ser Phe Gly Tyr Asp Val Ala Val Val Asp Leu Asn Lys Asp Gly  
355 360 365

Trp Gln Asp Ile Val Ile Gly Ala Pro Gln Tyr Phe Asp Arg Asp Gly  
370 375 380

Glu Val Gly Gly Ala Val Tyr Val Tyr Met Asn Gln Gln Gly Arg Trp  
385 390 395 400

## 17810-518.ST25

Asn Asn Val Lys Pro Ile Arg Leu Asn Gly Thr Lys Asp Ser Met Phe  
405 410 415

Gly Ile Ala Val Lys Asn Ile Gly Asp Ile Asn Gln Asp Gly Tyr Pro  
420 425 430

Asp Ile Ala Val Gly Ala Pro Tyr Asp Asp Leu Gly Lys Val Phe Ile  
435 440 445

Tyr His Gly Ser Ala Asn Gly Ile Asn Thr Lys Pro Thr Gln Val Leu  
450 455 460

Lys Gly Ile Ser Pro Tyr Phe Gly Tyr Ser Ile Ala Gly Asn Met Asp  
465 470 475 480

Leu Asp Arg Asn Ser Tyr Pro Asp Val Ala Val Gly Ser Leu Ser Asp  
485 490 495

Ser Val Thr Ile Phe Arg Ser Arg Pro Val Ile Asn Ile Gln Lys Thr  
500 505 510

Ile Thr Val Thr Pro Asn Arg Ile Asp Leu Arg Gln Lys Thr Ala Cys  
515 520 525

Gly Ala Pro Ser Gly Ile Cys Leu Gln Val Lys Ser Cys Phe Glu Tyr  
530 535 540

Thr Ala Asn Pro Ala Gly Tyr Asn Pro Ser Ile Ser Ile Val Gly Thr  
545 550 555 560

Leu Glu Ala Glu Lys Glu Arg Arg Lys Ser Gly Leu Ser Ser Arg Val  
565 570 575

Gln Phe Arg Asn Gln Gly Ser Glu Pro Lys Tyr Thr Gln Glu Leu Thr  
580 585 590

Leu Lys Arg Gln Lys Gln Lys Val Cys Met Glu Glu Thr Leu Trp Leu  
595 600 605

Gln Asp Asn Ile Arg Asp Lys Leu Arg Pro Ile Pro Ile Thr Ala Ser  
610 615 620

Val Glu Ile Gln Glu Pro Ser Ser Arg Arg Arg Val Asn Ser Leu Pro  
625 630 635 640

Glu Val Leu Pro Ile Leu Asn Ser Asp Glu Pro Lys Thr Ala His Ile  
Page 3

Asp Val His Phe Leu Lys Glu Gly Cys Gly Asp Asp Asn Val Cys Asn  
 660 665 670  
 Ser Asn Leu Lys Leu Glu Tyr Lys Phe Cys Thr Arg Glu Gly Asn Gln  
 675 680 685  
 Asp Lys Phe Ser Tyr Leu Pro Ile Gln Lys Gly Val Pro Glu Leu Val  
 690 695 700  
 Leu Lys Asp Gln Lys Asp Ile Ala Leu Glu Ile Thr Val Thr Asn Ser  
 705 710 715 720  
 Pro Ser Asn Pro Arg Asn Pro Thr Lys Asp Gly Asp Asp Ala His Glu  
 725 730 735  
 Ala Lys Leu Ile Ala Thr Phe Pro Asp Thr Leu Thr Tyr Ser Ala Tyr  
 740 745 750  
 Arg Glu Leu Arg Ala Phe Pro Glu Lys Gln Leu Ser Cys Val Ala Asn  
 755 760 765  
 Gln Asn Gly Ser Gln Ala Asp Cys Glu Leu Gly Asn Pro Phe Lys Arg  
 770 775 780  
 Asn Ser Asn Val Thr Phe Tyr Leu Val Leu Ser Thr Thr Glu Val Thr  
 785 790 795 800  
 Phe Asp Thr Pro Asp Leu Asp Ile Asn Leu Lys Leu Glu Thr Thr Ser  
 805 810 815  
 Asn Gln Asp Asn Leu Ala Pro Ile Thr Ala Lys Ala Lys Val Val Ile  
 820 825 830  
 Glu Leu Leu Leu Ser Val Ser Gly Val Ala Lys Pro Ser Gln Val Tyr  
 835 840 845  
 Phe Gly Gly Thr Val Val Gly Glu Gln Ala Met Lys Ser Glu Asp Glu  
 850 855 860  
 Val Gly Ser Leu Ile Glu Tyr Glu Phe Arg Val Ile Asn Leu Gly Lys  
 865 870 875 880  
 Pro Leu Thr Asn Leu Gly Thr Ala Thr Leu Asn Ile Gln Trp Pro Lys  
 885 890 895

## 17810-518.ST25

Glu Ile Ser Asn Gly Lys Trp Leu Leu Tyr Leu Val Lys Val Glu Ser  
 900 905 910

Lys Gly Leu Glu Lys Val Thr Cys Glu Pro Gln Lys Glu Ile Asn Ser  
 915 920 925

Leu Asn Leu Thr Glu Ser His Asn Ser Arg Lys Lys Arg Glu Ile Thr  
 930 935 940

Glu Lys Gln Ile Asp Asp Asn Arg Lys Phe Ser Leu Phe Ala Glu Arg  
 945 950 955 960

Lys Tyr Gln Thr Leu Asn Cys Ser Val Asn Val Asn Cys Val Asn Ile  
 965 970 975

Arg Cys Pro Leu Arg Gly Leu Asp Ser Lys Ala Ser Leu Ile Leu Arg  
 980 985 990

Ser Arg Leu Trp Asn Ser Thr Phe Leu Glu Glu Tyr Ser Lys Leu Asn  
 995 1000 1005

Tyr Leu Asp Ile Leu Met Arg Ala Phe Ile Asp Val Thr Ala Ala  
 1010 1015 1020

Ala Glu Asn Ile Arg Leu Pro Asn Ala Gly Thr Gln Val Arg Val  
 1025 1030 1035

Thr Val Phe Pro Ser Lys Thr Val Ala Gln Tyr Ser Gly Val Pro  
 1040 1045 1050

Trp Trp Ile Ile Leu Val Ala Ile Leu Ala Gly Ile Leu Met Leu  
 1055 1060 1065

Ala Leu Leu Val Phe Ile Leu Trp Lys Cys Gly Phe Phe Lys Arg  
 1070 1075 1080

Ser Arg Tyr Asp Asp Ser Val Pro Arg Tyr His Ala Val Arg Ile  
 1085 1090 1095

Arg Lys Glu Glu Arg Glu Ile Lys Asp Glu Lys Tyr Ile Asp Asn  
 1100 1105 1110

Leu Glu Lys Lys Gln Trp Ile Thr Lys Trp Asn Arg Asn Glu Ser  
 1115 1120 1125

Tyr Ser  
 1130

## 17810-518.ST25

<210> 2  
 <211> 2861  
 <212> DNA  
 <213> Homo sapiens

<400> 2  
 ctgtctcctgc gcggcagctg ctttagaagg tctcgagcct cctgtacctt cccagggatg 60  
 aaccgggcct tccctctgga aggcgaggggt tcggggccaca gtgagcgagg gccagggcg 120  
 tgggcgcgcg cagagggaaa ccggatcagt tgagagagaa tcaagagtag cggatgaggc 180  
 gcttgtgggg cgcgggcccgg aagccctcgg gcgcgggctg ggagaaggag tgggcggagg 240  
 cgccgcagga ggctcccggg gcctggctcg gccggctggg ccccgggcgc agtgggaagaa 300  
 agggacgggc ggtgcccggg tgggctgcct ggccagctca ccttgccctg gcggctcgcc 360  
 ccgcccggca cttgggagga gcagggcagg gcccgcggcc ttgcatctt gggaccgccc 420  
 ccttcattc ccgggcccagc ggcgagcggc agcgacggct ggagccgcag ctacagcatg 480  
 agagccggtg ccgctcctcc acgcctgcgg acgcgtggcg agcggaggca gcgctgcctg 540  
 ttcgcgcat gggggcaccg tggggctcgc cgacggcggc ggcgggcggg cggcgcgggt 600  
 ggcgcgagg ccgggggctg ccatggaccg tctgtgtgct ggcgggccgc ggcttgacgt 660  
 gtacggcgct gatcacctac gcttgctggg ggcagctgcc gccgctgccc tgggctcgc 720  
 caaccccgct gcgaccggtg ggcgtgctgc tgtggtggga gcccttcggg gggcgcgata 780  
 gcgccccag gccgccccct gactgccggc tgcgcttcaa catcagcggc tgccgcctgc 840  
 tcaccgaccg cgcgtcctac ggagaggctc aggccgtgct tttccaccac cgcgacctcg 900  
 tgaaggggccc ccccgactgg ccccgccct ggggcatcca ggcgcacact gccgaggagg 960  
 tggatctgcg cgtgttgac tacgaggagg cagcggcggc ggcagaagcc ctggcgacct 1020  
 ccagccccag gccccgggc cagcgtggg tttggatgaa cttcgagtcg ccctcgact 1080  
 cccggggct gcgaagcctg gcaagtaacc tcttcaactg gacgctctcc taccgggcg 1140  
 actcgacgt ctttgtgcct tatggctacc tctaccccag aagccacccc ggcgaccgc 1200  
 cctcaggcct ggccccgcca ctgtccagga aacaggggct ggtggcatgg gtggtgagcc 1260  
 actgggacga gcgccaggcc cgggtccgct actaccacca actgagccaa catgtgaccg 1320  
 tggacgtgtt cgcccgggc gggccggggc agccggtgcc cgaaattggg ctctgcaca 1380  
 cagtggccc ctacaagttc tacctggctt tcgagaactc gcagcacctg gattatatca 1440  
 ccgagaagct ctggcgcaac gcgttgctcg ctggggcggt gccggtggtg ctgggcccag 1500  
 accgtgcaa ctacgagcgc tttgtgcccc gcggcgccct catccacgtg gacgacttcc 1560  
 caagtgcctc ctccctggcc tcgtacctgc ttttctcga ccgcaacccc gcggtctatc 1620  
 gccgctactt ccactggcgc cggagctacg ctgtccacat cacctcctt tgggacgagc 1680

## 17810-518.ST25

cttggtgccg ggtgtgccag gctgtacaga gggctgggga ccggcccaag agcatacggg	1740
acttggccag ctggttcgag cgggtgaagcc gcgctcccct ggaagcgacc caggggagggc	1800
caagttgtca gctttttgat cctctactgt gcatctcctt gactgccgca tcatgggagt	1860
aagttcttca aacacccatt tttgctctat gggaaaaaaa cgatttacca attaataatta	1920
ctcagcacag agatgggggc ccggtttcca ttttttttgc acagctagca attgggctcc	1980
ctttgctgct gatgggcatc attgtttagg ggtgaaggag ggggttcttc ctcaccttgt	2040
aaccagtgca gaaatgaaat agcttagcgg caagaagccg ttgaggcggg ttcctgaatt	2100
tccccatctg ccacaggcca tttttgtggc ccgtgcagct tccaaatctc atacacaact	2160
gttcccgatt cacgtttttc tggaccaagg tgaagcaaatt ttgtggttgt agaaggagcc	2220
ttgttggtgg agagtggaag gactgtggct gcagggtggga ctttgttggt tggattcctc	2280
acagccttgg ctcctgagaa aggtgaggag ggcagtccaa gaggggccgc tgacttcttt	2340
cacaagtact atctgttccc ctgtcctgtg aatggaagca aagtgttgga ttgtccttgg	2400
aggaaactta agatgaatac atgcgtgtac ctcactttac ataagaaatg tattcctgaa	2460
aagctgcatt taaatcaagt cccaaattca ttgacttagg ggagttcagt atttaatgaa	2520
accctatgga gaatttatcc ctttacaatg tgaatagtca tctcctaatt tgtttcttct	2580
gtctttatgt ttttctataa cctggatttt ttaaatcata ttaaaattac agatgtgaaa	2640
ataaagcaga agcaaccttt ttccctcttc ccagaaaacc agtctgtgtt tacagacaga	2700
agagaaggaa gccatagtgt cacttcaca caattattta tttcatgtct ttactggacc	2760
tgaaatttaa actgcaatgc cagtcctgca ggagtgtgg cattaccctc tgcagaacag	2820
tgaaagggtat tgcactacat tatggaatca tgcaaaaaa a	2861